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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/518,937	03/06/2000	Ajay Divakaran		8894
7590	08/20/2004		EXAMINER	
Patent Department Mitsubishi Electric Information Technology Center America Inc 201 Broadway Cambridge, MA 02139			NGUYEN, MAIKHANH	
			ART UNIT	PAPER NUMBER
			2176	
			DATE MAILED: 08/20/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/518,937	DIVAKARAN ET AL.
	Examiner	Art Unit
	Maikhahan Nguyen	2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

1) Responsive to communication(s) filed on 05/07/2004.

2a) This action is **FINAL**.                            2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

4) Claim(s) 1-13 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-13 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_.

***DETAILED ACTION***

1. This action is responsive to communications: Request for Reconsideration filed 05/07/2004 to the original application filed 03/06/2000.
2. Claims 1-13 are currently pending in this application. Claim 1 is independent claim.

***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 1 is rejected under the judicially created doctrine of double patenting over claim 1 of U. S. Patent No. 6,546,135 (issued April, 2003) in view of **Lee et al.** “Querying Multimedia Presentations Based on Content”, issued 06/1999.

Although the conflicting claims are not identical, they are not patentably distinct from each other because claim 1 of the instant application and claim 1 of patent ‘135 are both claiming segmenting the multimedia content to extract objects; extracting and associating features of the objects to produce content entities, coding the content entities to produce directed acyclic graphs of the content entities, each directed acyclic graph representing a particular interpretation of the multimedia content.

The only difference between the instant application and patent ‘135 is the instant application further recites “*measuring attributes of each content entity; and assigning the measured attributes to each corresponding content entity in the directed acyclic graphs to rank order the multimedia content*” for “*measuring attributes of each content entity; and assigning the measured attributes to each corresponding content entity in the directed acyclic graphs*”, Lee teaches “*Paths of a multimedia presentation graph are specified by using computational tree logic ...to identify distinct paths and to specifically refer to nodes in multimedia presentation graphs*” (page 362, left column, fourth full paragraph), and for “*rank order the multimedia content*”, Lee teaches “*a multimedia presentation graph specifies the playout order of various types of streams making up the multimedia presentation*” (page 361, right column, last paragraph). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Lee’s teaching and patent ‘135 because Lee’s teaching would have provided the

capability for allowing users to express relationships between nodes, edges, and paths along presentation graphs.

As to the remaining claims 2-13, they are also rejected under obvious type double patenting as stated in claim 1 above.

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Lee et al.** “Querying Multimedia Presentations Based on Content”, issued 06/1999, as cited the previous Office Action.

**As to independent claim 1**, Lee teaches a method for ordering multimedia content, comprising the steps of:

- segmenting the multimedia content to extract objects (*e.g., note video and audio objects in Fig. 1*);
- extracting and associating features of the objects to produce content entities (*page 362, left column, second full paragraph*);
- coding the content entities to produce directed acyclic graphs of the content entities, each directed acyclic graph representing a particular interpretation of the multimedia content (*page 363, right column, third and fourth full paragraphs; the edges connecting the nodes determines playout of streams*).

While Lee teaches measuring attributes of each content entity and assigning the measured attributes to each corresponding content entity in the directed acyclic graphs (*Paths of a multimedia presentation graph are specified by using computational tree logic ...to identify distinct paths and to specifically refer to nodes in multimedia presentation graphs; page 362, left column, fourth full paragraph*), Lee does not explicitly teach “rank order the multimedia content”.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to have applied Lee’s teaching to include “rank order the multimedia content” because it would have provided the capability for allowing users to express relationships between nodes, edges, and paths along presentation graphs.

The fact that Lee’s teaching “*a multimedia presentation graph specifies the playout order of various types of streams making up the multimedia presentation*” (page 361, right column, last paragraph) purpose of specifying the playout order of various types of streams in Lee suggests ranking order the multimedia content in the directed acyclic graphs.

**As to dependent claim 2**, Lee teaches the measured attributes include intensity attributes (*Fig. 2; page 363*).

**As to dependent claim 3**, Lee teaches the measure attributes include direction attributes (*two special attributes; page 363*).

**As to dependent claim 4**, Lee teaches the measured attributes include spatial attributes (*partial attributes; page 365*).

**As to dependent claim 5**, Lee teaches the measured attributes include temporal attributes (*GVISUAL represents temporal operators; page 364*).

**As to dependent claim 6**, Lee teaches the measured attributes are arranged in an increasing rank order (page 361, right column, last paragraph *and Fig. 1*).

**As to dependent claim 7**, Lee teaches the measured attributes are arranged in an decreasing rank order (page 361, right column, last paragraph *and Fig. 1*).

**As to dependent claim 8**, Lee teaches the step of traversing the multimedia content according to the directed acyclic graph (*e.g., graph traversals and GCalculus; page 378; left column*) and the measured attributes assigned to the content entities (*page 362, left column, fourth full paragraph*).

**As to dependent claim 9**, Lee teaches the step of summarizing the multimedia content according to the directed acyclic graph and the measured attributes assigned to the content entities (*page 363; right column; third and fourth paragraphs*).

**As to dependent claim 10**, Lee teaches the multimedia content is a three dimensional video sequence (*Multimedia information content; page 3; section 4.1*).

**As to dependent claim 11**, Lee teaches nodes of the directed acyclic graphs represent the content entities and edges represent breaks in the segmentation, and the measured attributes are associated with the corresponding edges (*page 363, right column; third and fourth paragraphs*). Since edges describe sequential playout of streams, for example, the edges would present breaks (temporal) in the segmentation.

**As to dependent claim 12**, Lee teaches at least one secondary content entity is associated with a particular content entity, and wherein the secondary content entity is selected during the traversing (*object composition ... BINDER object; section 5.2*).

**As to dependent claim 13**, Lee teaches a summary of the multimedia is a selected permutation of the content entities according to the associated ranks (*page 361; right column, last paragraph and Fig. 5.1*).

### ***Response to Arguments***

5. Applicant's arguments filed 08/28/2003 have been fully considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sarkar et al.                    U.S Patent No. 6,292,938                    issued: Sep. 18, 2001

IBM Technical Disclosure Bulletin, "Encoding Data Into Irrational Magic Numbers for Fast Searching and Comparing", November 1993, Volume No. 36, pp. 1-2.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maikhahan Nguyen whose telephone number is (703) 306-0092. After mid-October, 2004, the examiner can be reached at (571) 272-4093. The examiner can normally be reached on Monday - Friday from 9:00am – 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H Feild can be reached on (703) 305-9792.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Maikhahan Nguyen  
August 17, 2004



JOSEPH H. FEILD  
PRIMARY EXAMINER